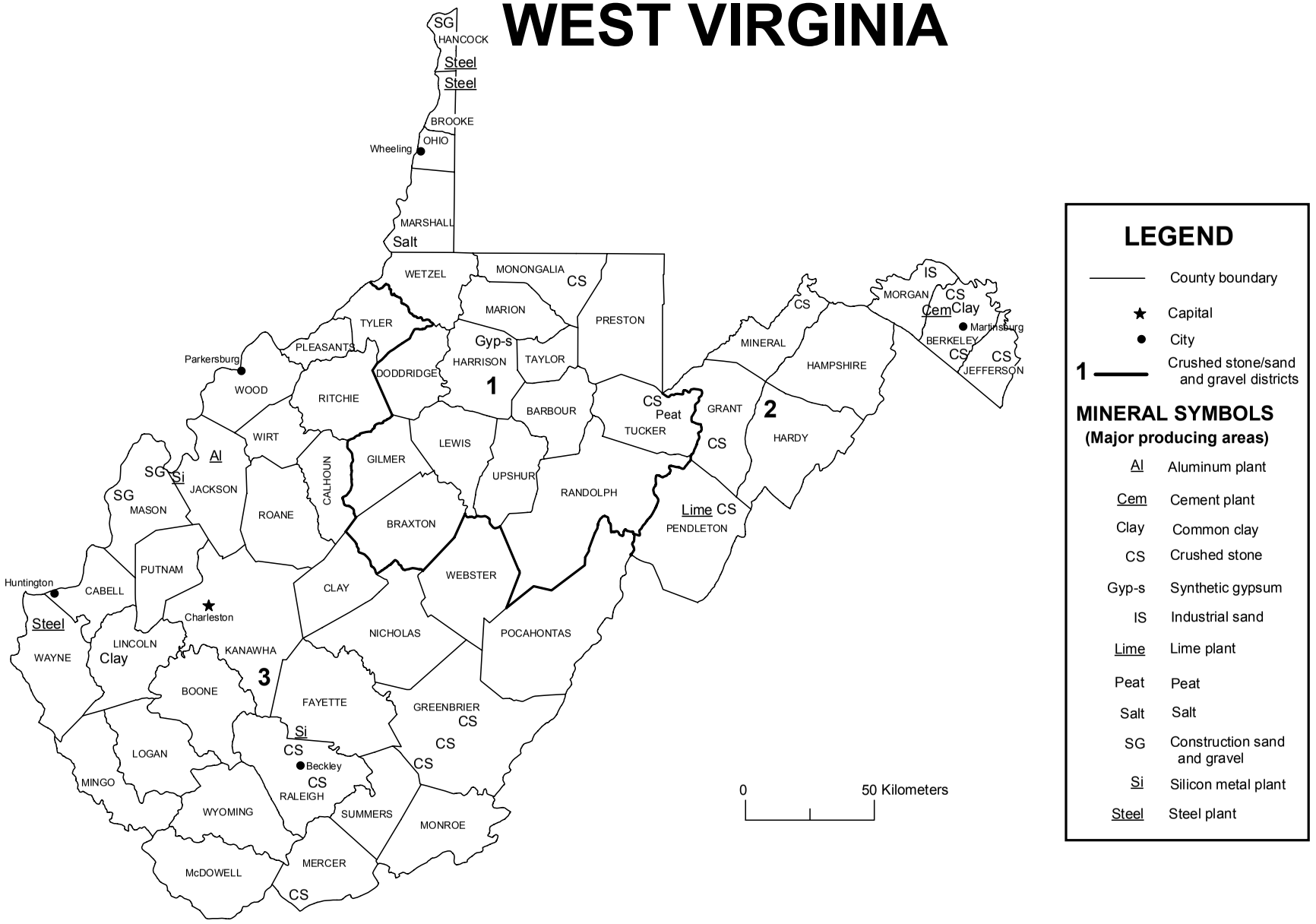
WEST VIRGINIA



LEGEND

- County boundary
- ★ Capital
- ● City
- 1 —— Crushed stone/sand and gravel districts

MINERAL SYMBOLS
(Major producing areas)

Al	Aluminum plant
Cem	Cement plant
Clay	Common clay
CS	Crushed stone
Gyp-s	Synthetic gypsum
IS	Industrial sand
Lime	Lime plant
Peat	Peat
Salt	Salt
SG	Construction sand and gravel
Si	Silicon metal plant
Steel	Steel plant

Source: West Virginia Geological and Economic Survey/U.S. Geological Survey (2003)

THE MINERAL INDUSTRY OF WEST VIRGINIA

This chapter has been prepared under a Memorandum of Understanding between the U.S. Geological Survey and the West Virginia Geological and Economic Survey for collecting information on all nonfuel minerals.

In 2003, the estimated value[1] of nonfuel mineral production for West Virginia was $168 million, based upon preliminary U.S. Geological Survey (USGS) data. This was a marginal increase from that of 2002[2] and followed a 5.6% decrease from 2001 to 2002. In 2003, crushed stone continued to be West Virginia's leading nonfuel mineral by value, representing approximately 39% of the State's total nonfuel mineral production value. Cement (portland and masonry), industrial sand and gravel, lime, and salt followed. These five mineral commodities accounted for about 95% of the State's total nonfuel raw mineral production value.

In 2003, increases in the values of crushed stone and lime slightly more than offset decreases in industrial sand and gravel, cement, and construction sand and gravel, resulting in a net increase for the year. In 2002, decreases happened in the production and values of portland cement, crushed stone, and construction sand and gravel, the values of which were down about $6 million, more than $2 million, and nearly $1 million, respectively. The values of all other mineral commodities decreased less than $1 million or were unchanged (table 1).

Based upon USGS estimates of the quantities of minerals produced in the 50 States in 2003, West Virginia continued to be ninth in the production of salt; the State also produced significant quantities of crushed stone, industrial sand and gravel, and masonry cement. West Virginia mines produced only industrial minerals and coal; no metals were mined in the State. Primary aluminum and raw steel were produced in West Virginia, but both metals were processed from materials acquired from foreign and other domestic sources. In 2003, West Virginia ranked 11th in the Nation (10th from 2000-02) among 12 producing States in the production of primary aluminum.

Elkem Metals Company produced silicon metal and ferroalloys from domestic sources in its plant at Alloy, WV. In October, 2003, Weirton Steel, the fifth largest U.S. steelmaker and in bankruptcy, announced that it was involved in merger discussions with International Steel Group of Cleveland, OH (Azom, 2003§[3]).

Internet Reference Cited

Azom, 2003 (October 9), Weirton Steel confirm merger talks with ISG, News Release, accessed August 30, 2004, at URL http://www.azom.com/news_old.asp?newsID=842.

[1]The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending upon the mineral products. Production may be measured by mine shipments, mineral commodity sales, or marketable production (including consumption by producers) as is applicable to the individual mineral commodity.

All 2003 USGS mineral production data published in this chapter are preliminary estimates as of July 2004 and are expected to change. For some mineral commodities, such as construction sand and gravel, crushed stone, and portland cement, estimates are updated periodically. To obtain the most current information, please contact the appropriate USGS mineral commodity specialist. Specialist contact information may be retrieved over the Internet at URL http://minerals.usgs.gov/minerals/contacts/comdir.html; alternatively, specialists' names and telephone numbers may be obtained by calling USGS information at (703) 648-4000 or by calling the USGS Earth Science Information Center at 1-888-ASK-USGS (275-8747). All Mineral Industry Surveys—mineral commodity, State, and country—also may be retrieved over the Internet at URL http://minerals.usgs.gov/minerals.

[2]Values, percentage calculations, and rankings for 2002 may differ from the Minerals Yearbook, Area Reports: Domestic 2002, Volume II, owing to the revision of preliminary 2002 to final 2002 data. Data for 2003 are preliminary and are expected to change; related rankings also may change.

[3]A reference that includes a section mark (§) is found in the Internet Reference Cited section.

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN WEST VIRGINIA[1, 2]

(Thousand metric tons and thousand dollars)

Mineral	2001		2002		2003[p]	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays, common	167	462	151	407	151	407
Gemstones	NA	1	NA	1	NA	1
Sand and gravel, construction	1,820	9,260	1,700	8,450	1,600	8,000
Stone, crushed	15,300	65,700	14,400	63,400	14,800	65,900
Combined values of cement, lime, peat, salt, sand and gravel (industrial), stone (dimension sandstone)	XX	102,000	XX	94,900	XX	94,100
Total	XX	177,000	XX	167,000	XX	168,000

[p]Preliminary. NA Not available. XX Not applicable.
[1]Production as measured by mine shipments, sales, or marketable production (including consumption by producers).
[2]Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 2
WEST VIRGINIA: CRUSHED STONE SOLD OR USED, BY KIND[1]

	2001				2002			
Kind	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	31	13,900	$59,100	$4.26	30	12,200	$51,500	$4.23
Sandstone	8	1,450	6,670	4.61	9	2,230	11,800	5.31
Total or average	XX	15,300	65,700	4.29	XX	14,400	63,400	4.40

XX Not applicable.
[1]Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

TABLE 3

WEST VIRGINIA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2002, BY USE[1]

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Construction:			
Coarse aggregate (+1 1/2 inch):			
Macadam	W	W	$7.72
Riprap and jetty stone	79	$621	7.86
Filter stone	W	W	9.62
Other coarse aggregates	229	908	3.97
Total or average	338	1,810	5.35
Coarse aggregate, graded:			
Concrete aggregate, coarse	W	W	6.64
Bituminous aggregate, coarse	W	W	6.88
Bituminous surface-treatment aggregate	W	W	5.90
Railroad ballast	W	W	5.84
Other graded coarse aggregates	545	2,820	5.17
Total or average	767	4,270	5.56
Fine aggregate (-3/8 inch):			
Stone sand, concrete	(2)	(2)	6.61
Screening, undesignated	90	675	7.50
Other fine aggregates	246	1,020	4.16
Total or average	336	1,700	5.06
Coarse and fine aggregate:			
Graded road base or subbase	221	1,300	5.90
Unpaved road surfacing	W	W	7.33
Terrazzo and exposed aggregate	W	W	5.84
Crusher run or fill or waste	43	269	6.26
Other coarse and fine aggregates	796	4,560	5.73
Total or average	1,170	6,830	5.83
Agricultural limestone	(3)	(3)	11.19
Chemical and metallurgical:			
Cement manufacture	W	W	3.69
Lime manufacture	W	W	3.69
Sulfur oxide removal	W	W	6.06
Total or average	1,550	6,230	4.03
Special, mine dusting or acid water treatment	(3)	(3)	3.69
Unspecified:[4]			
Reported	8,370	35,600	4.25
Estimated	1,800	6,400	3.60
Total or average	10,100	42,000	4.14
Grand total or average	14,400	63,400	4.40

W Withheld to avoid disclosing company proprietary data; included in "Total."

[1]Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

[2]Withheld to avoid disclosing company proprietary data; included with "Other."

[3]Withheld to avoid disclosing company proprietary data; included in "Grand total."

[4]Reported and estimated production without a breakdown by end use.

TABLE 4

WEST VIRGINIA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2002, BY USE AND DISTRICT[1]

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1 1/2 inch)[2]	W	W	W	W	151	885
Coarse aggregate, graded[3]	W	W	W	W	449	2,470
Fine aggregate (-3/8 inch)[4]	W	W	W	W	78	345
Coarse and fine aggregate[5]	W	W	W	W	828	4,870
Agricultural[6]	--	--	W	W	--	--
Chemical and metallurgical[7]	--	--	W	W	--	--
Special[8]	--	--	W	W	--	--
Unspecified:[9]						
Reported	3,670	17,000	2,390	9,220	2,310	9,360
Estimated	410	1,900	1,000	3,000	360	1,500
Total	4,670	21,700	5,560	22,200	4,180	19,400

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Includes filter stone, macadam, riprap and jetty stone, and other coarse aggregates.

[3]Includes bituminous aggregate (coarse), bituminous surface-treatment aggregate, concrete aggregate (coarse), railroad ballast, and other graded coarse aggregates.

[4]Includes screening (undesignated), stone sand (concrete), and other fine aggregates.

[5]Includes crusher run (select material or fill), graded road base or subbase, terrazzo and exposed aggregate, unpaved road surfacing, and other coarse and fine aggregates.

[6]Includes agricultural limestone.

[7]Includes cement manufacture, lime manufacture, and sulfur oxide removal.

[8]Includes mine dusting or acid water treatment.

[9]Reported and estimated production without a breakdown by end use.

TABLE 5
WEST VIRGINIA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2002, BY MAJOR USE CATEGORY[1, 2]

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate and concrete products[3]	W	W	$4.50
Fill	W	W	4.56
Other miscellaneous uses	1,480	$7,270	4.92
Unspecified:[4]			
Reported	W	W	5.07
Estimated	230	1,200	5.25
Total or average	1,700	8,450	4.96

W Withheld to avoid disclosing company proprietary data; included in "Other miscellaneous uses."

[1]To avoid disclosing company proprietary data, no district tables were produced in 2002.

[2]Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

[3]Includes plaster and gunite sands.

[4]Reported and estimated production without a breakdown by end use.